

IN THE CLAIMS

Please amend the claims as follows:

Claims 1-14 (Canceled).

Claim 15 (Currently Amended): A differential gear unit which divides an input driving force into a first output and a second output and permits a difference between a rotational speed of the first output and a rotational speed of the second output, comprising:

a casing that defines an internal space and an opening communicated with the internal space and that is rotatable in a given rotational direction and in a rotational direction opposite to the given rotational direction, the casing including an input portion in which the driving force is input, the casing being configured such that fatigue life of the casing when the driving force is repeatedly input in the input portion in the given rotational direction is greater than fatigue life of the casing when the driving force is repeatedly input in the input portion in the rotational direction opposite to the given rotational direction, rotation in the given direction being a rotation around a longitudinal rotational axis of the differential gear casing;

a dividing mechanism that is provided in the internal space, and includes a pinion and that divides the driving force into the first output and the second output; and

a support member that is provided so as to contact the casing and so as to support the dividing mechanism and that includes a pinion shaft that supports the pinion such that the pinion can rotate on its axis and which makes the pinion revolve around a center of the casing,

wherein the fatigue life of the casing is adjusted by making a shape of the opening asymmetrical with respect to the longitudinal rotational axis of the casing,

wherein the opening is in a basically elliptical shape having a round shape at each of corner portions, and the round shapes of adjacent corner portions are different from each other, and a radius of the round shape of each corner portion continuously changes,

wherein a portion at which the fatigue life of the casing is increased is a first corner portion at which the tensile stress is generated when forward driving force is input,

wherein the first corner portion has increased strength relative to other corner portions of the opening of the casing,

wherein a curvature radius of the round shape of the first corner portion of the opening, where a tensile stress is generated when the driving force is input in the given rotational direction, is larger than a curvature radius of the round shape of a second corner portion of the opening, where a compression stress is generated when the driving force is input in the given rotational direction,

wherein the fatigue life of the casing is also adjusted by heat treatment, and

wherein the first corner portion of the opening of the casing is a heat treated corner portion.

Claim 16 (Previously Presented): The differential gear unit according to claim 15, wherein the casing includes a support portion that contacts the support member, and the fatigue life is measured by inputting the driving force in the input portion without rotating the support portion.

Claim 17 (Previously Presented): The differential gear unit according to claim 15, wherein the casing includes an output portion that is provided at a position that is different from a position of the support portion, and the fatigue life is measured by inputting the driving force in the input portion without rotating the output portion.

Claim 18 (Previously Presented): The differential gear unit according to claim 15, wherein the first corner portion includes at least one of an induction hardening and a carburizing treatment.

Claim 19 (Previously Presented): The differential gear unit according to claim 15, wherein the casing includes a physically treated corner portion of the opening.

Claim 20 (Previously Presented): The differential gear unit according to claim 19, wherein the physically treated corner portion is the first corner portion.

Claim 21 (Previously Presented): The differential gear unit according to claim 19, wherein the physically treated corner portion includes at least one of shot blasting and shot peening.

Claim 22 (Previously Presented): The differential gear unit according to claim 17, wherein the opening further comprises a straight portion that is located closest to the output portion, and

wherein the straight portion is perpendicular to the longitudinal rotational axis of the differential gear casing.

Claim 23 (Previously Presented): The differential gear unit according to claim 15, wherein the curvature radii of each of the corner portions is different than a curvature of radii of a respectively adjacent corner portion.

Claim 24 (Canceled).

Claim 25 (Canceled).

Claim 26 (Previously Presented): The differential gear unit according to Claim 15 further comprising a third corner portion that is not adjacent to the first corner portion, wherein the fatigue life of the casing is also further increased at the third corner portion.

Claim 27 (Currently Amended): The differential gear unit according to Claim 15, further comprising:

an output portion provided to the casing opposite the input portion; and  
a third corner portion of the opening that has a curvature of radius larger than a curvature of radius of an adjacent corner portion and that is located farther from the input portion than from the output portion,

wherein the second corner portion is adjacent to the third corner portion and located farther from the input portion than from the output portion,

wherein the opening is a first opening,

wherein the casing includes a second opening identically dimensioned as the first opening,

wherein the support member includes a first hole and a second hole, and

wherein a circumferential distance around the casing between the first opening and the first hole is greater than a circumferential distance around the casing between the second opening and the first hole,and

~~wherein a thickness of the casing in the given rotational direction at the third corner portion is larger than a thickness of the casing in the given rotational direction at the second corner portion.~~